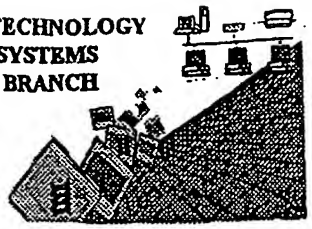
BIOTECHNOLOGY SYSTEMS BRANCH



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/510,873
Source: IFW16
Date Processed by STIC: 10-14-04

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, **EFS Submission User Manual** - ePAVE)
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Revised 05/17/04

IFW16

RAW SEQUENCE LISTING DATE: 10/14/2004
PATENT APPLICATION: US/10/010,873 TIME: 10:23:26

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

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  3 <110> APPLICANT: Babraham Bioscience Technologies Limited
  5 <120> TITLE OF INVENTION: Recombinant Nematode Nicotinic Receptor and Uses
  7 <130> FILE REFERENCE: 18396/2112
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/010,873
 10 <141> CURRENT FILING DATE: 2001-12-07
 12 <150> PRIOR APPLICATION NUMBER: PCT/GB00/02270
 13 <151> PRIOR FILING DATE: 2000-06-09
 15 <150> PRIOR APPLICATION NUMBER: GB9913248.2
 16 <151> PRIOR FILING DATE: 1999-06-09
 18 <160> NUMBER OF SEQ ID NOS: 4
 20 <170> SOFTWARE: PatentIn Ver. 3.1
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Does Not Comply
Corrected Diskette Needed

ERRORED SEQUENCES

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126 <211> LENGTH: 513
127 <212> TYPE: PRT
128 <213> ORGANISM: Caenorhabditis elegans
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135             20                  25                  30
137 Asp Leu Met Val Asn Tyr Asn Arg His Arg Arg Pro Ser Thr Ser Pro
138         35                  40                  45
140 Asn Lys Pro Leu Thr Ile Lys Leu Lys Leu Lys Leu Arg Leu Ser Gln
141     50                  55                  60
143 Ile Ile Asp Val His Glu Ile Asp Gln Ile Met Thr Cys Ser Val Trp
144 65                  70                  75                  80
E--> 146 Leu Lys Gln Thr Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
147                 85                  90                  95
E--> 149 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Trp Val
150             100                 105                 110
152 Pro Asp Ile Val Leu Tyr Asn Asn Ala Asp Ser Asn Tyr Asn Ile Thr
153         115                 120                 125
155 Ile Ser Thr Lys Ala Thr Leu His Tyr Thr Gly Glu Val Thr Trp Glu
156     130                 135                 140
158 Pro Pro Ala Ile Phe Lys Ser Met Cys Gln Ile Asp Val Arg Trp Phe
159 145                 150                 155                 160
161 Pro Phe Asp Glu Gln Gln Cys His Leu Lys Phe Gly Ser Trp Thr Phe
162                 165                 170                 175
164 Ser Glu Asn Leu Leu Ser Val Glu Leu Asn Glu Pro Ser Leu Arg Tyr
```

explanation for Xaa is mandatory
see p. 6.

RAW SEQUENCE LISTING DATE: 10/14/2004
PATENT APPLICATION: US/10/010,873 TIME: 10:23:26

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

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E--> 167 Glu Glu Glu Ile Asp Glu Lys Gly Ile Ile Asp Asn Val Xaa Xaa Xaa
     168         195                 200                 205
E--> 170 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     171     210                 215                 220
E--> 173 Xaa Met Ser Arg Val Ala Lys Arg Arg Ala Lys Asn Tyr Pro Ser Cys
     174 225                 230                 235                 240
     176 Cys Pro Gln Ser Ala Tyr Ile Asp Val Thr Tyr Tyr Leu Gln Leu Arg
     177                 245                 250                 255
     179 Arg Lys Pro Leu Phe Tyr Thr Val Asn Leu Val Phe Pro Cys Val Gly
     180                 260                 265                 270
     182 Ile Ser Phe Leu Thr Ile Leu Val Phe Tyr Leu Pro Ser Asp Ser Gly
     183         275                 280                 285
     185 Glu Lys Val Thr Leu Cys Ile Ser Ile Leu Val Ala Leu Thr Ile Phe
     186     290                 295                 300
     188 Phe Leu Leu Leu Thr Glu Ile Ile Pro Ala Thr Ser Ile Thr Leu Pro
     189 305                 310                 315                 320
E--> 191 Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     192                 325                 330                 335
E--> 194 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu His Phe Arg Thr Pro Thr
     195             340                 345                 350
     197 Thr His Leu Met Pro Asn Trp Val Lys Lys Val Phe Leu Lys Trp Leu
     198         355                 360                 365
     200 Pro Lys Leu Leu Phe Met Arg Arg Pro Ile Asp Asp Tyr Glu Glu Lys
     201     370                 375                 380
     203 Phe Asp Asp Lys Lys Lys Pro Lys Asp Gly Lys Ile Ala Leu Ser Val
     204 385                 390                 395                 400
     206 His Ala His Arg Val Ser Asn Val Gly Asn Asn Ile Arg Asn Ala Thr
     207                 405                 410                 415
E--> 209 Ile Asp Asp Thr Ile Gln Lys Met Tyr Tyr Ser Pro Pro Xaa Xaa Xaa
     210             420                 425                 430
E--> 212 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     213         435                 440                 445
E--> 215 Xaa Xaa Xaa Xaa Ile Asp Glu Asp Trp Lys Tyr Val Ala Met Val Leu
     216     450                 455                 460
     218 Asp Arg Leu Phe Leu Leu Ile Phe Ser Ile Ala Cys Phe Val Gly Thr
     219 465                 470                 475                 480
     221 Val Ile Ile Leu Leu Arg Ala Pro Thr Leu Tyr Asp Thr Arg Gln Pro
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     231 <211> LENGTH: 507
     232 <212> TYPE: PRT
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Same error

RAW SEQUENCE LISTING DATE: 10/14/2004
PATENT APPLICATION: US/10/010,873 TIME: 10:23:26

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

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     239 Gly Phe Leu Val Phe Leu Ala Val Ser Leu Arg Asn His Ser Thr Cys
     240              20                  25                  30
     242 Glu Asp Ile Asp Ala Glu Asp Arg Leu Met Val Asp Leu Phe Arg Gly
     243          35                  40                  45
     245 Tyr Asn Ser Leu Val Gln Pro Val Arg Asn Arg Ser Glu Leu Pro Met
     246      50                  55                  60
     248 Ile Val Lys Ile Gly Met Gln Leu Val Leu Leu Ile Asn Val Asp Glu
     249  65                  70                  75                  80
E--> 251 Lys Glu Gln Val Met His Thr Asn Val Trp Leu Thr Met Lys Trp Xaa
     252                  85                  90                  95
E--> 254 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     255              100                 105                 110
E--> 257 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Trp Leu Pro Asp Ile Val Leu Phe
     258          115                 120                 125
     260 Asn Asn Ala Asp Gly Asn Tyr Glu Val Ser Phe Met Cys Asn Val Leu
     261      130                 135                 140
     263 Ile Leu Ser Thr Gly Thr Val Leu Trp Val Pro Pro Ala Ile Tyr Lys
     264 145                 150                 155                 160
     266 Ser Ser Cys Ile Ile Asp Val Glu Phe Phe Pro Phe Asp Asp Gln Leu
     267                  165                 170                 175
     269 Cys Ser Leu Thr Phe Gly Ser Trp Thr Tyr Asn Arg Asp Glu Ile Lys
     270              180                 185                 190
E--> 272 Leu Asp Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     273          195                 200                 205
E--> 275 Xaa Xaa Xaa Xaa Xaa Xaa Met Asp Gly Pro Ala Val Leu Thr Ser Asp
     276      210                 215                 220
     278 Arg Ser Arg Ile Glu Phe Gln Ile Arg Ile Arg Arg Lys Thr Leu Phe
     279 225                 230                 235                 240
     281 Tyr Thr Val Val Leu Ile Leu Pro Thr Val Leu Met Ala Phe Leu Asn
     282                  245                 250                 255
     284 Val Thr Val Phe Tyr Leu Pro Thr Ala Ser Gly Glu Lys Met Gly Leu
     285              260                 265                 270
     287 Thr Met Asn Val Leu Leu Ser Ile Val Val Phe Leu Leu Leu Val Ser
     288          275                 280                 285
E--> 290 Lys Ile Leu Pro Pro Thr Ser Ser Ser Ile Pro Leu Xaa Xaa Xaa Xaa
     291      290                 295                 300
E--> 293 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     294 305                 310                 315                 320
E--> 296 Xaa Xaa Xaa Xaa Ile Tyr Phe Arg Ser Pro Ile Thr His Arg Leu Pro
     297                  325                 330                 335
     299 Pro Trp Val Arg Lys Val Phe Leu Asp Ile Leu Pro Leu Leu Met Cys
     300              340                 345                 350
     302 Met Gln Arg Pro His Arg Lys Asn Val Ile Gln Arg Ser His Arg Arg
     303          355                 360                 365
     305 Leu Leu Glu Thr Gly Pro Ser Val Glu Glu Asn Pro Met Arg Ser Gly
     306      370                 375                 380
     308 Glu His His Pro Leu Cys Arg His Thr His Asn Gln Asp Ser Cys Arg
     309 385                 390                 395                 400
     311 Arg Val Arg Ile Gln Ser Asp Glu Leu Asp Asp Glu Leu Ser Pro Glu
```

some error

RAW SEQUENCE LISTING DATE: 10/14/2004
PATENT APPLICATION: US/10/010,873 TIME: 10:23:26

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

```
     312                 405                 410                 415
E--> 314 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     315             420                 425                 430
E--> 317 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Arg Asp Asp Trp Lys Phe Ile Ala
     318         435                 440                 445
     320 Ser Val Val Asp Arg Phe Leu Leu Tyr Gly Phe Phe Gly Ala Thr Val
     321     450                 455                 460
     323 Gly Gly Thr Ile Gly Ile Ile Phe Thr Ala Pro Ser Val Phe Glu Thr
     324 465                 470                 475                 480
     326 Phe Asp Glu Asn Ala Thr Leu Val Lys Leu Lys Gln Leu Tyr Asp Met
     327                 485                 490                 495
     329 Gly Leu Ala Asn Asp Thr Val Leu Gly Ile Phe
     330             500                 505
     333 <210> SEQ ID NO: 4
     334 <211> LENGTH: 493
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     338 <400> SEQUENCE: 4
     339 Met Arg Thr Asn Arg Leu Ser Trp Ile Leu Val Leu Ser Val Val Ile
     340   1               5                  10                  15
     342 Phe Leu Val Ile Ile Asn Thr Ile Asn Ala Ser Asp Asp Glu Glu Arg
     343              20                  25                  30
     345 Leu Met Val Asp Val Phe Arg Gly Tyr Asn Ser Leu Ile Gln Pro Val
     346          35                  40                  45
     348 Arg Asn Ser Ser Glu Leu Pro Leu Ile Val Lys Met Ala Leu Gln Leu
     349      50                  55                  60
     351 Val Leu Leu Ile Asn Val Asp Glu Lys Asp Gln Val Met His Thr Asn
     352  65                  70                  75                  80
E--> 354 Val Trp Leu Thr Leu Gln Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     355                  85                  90                  95
E--> 357 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val
     358             100                 105                 110
     360 Trp Leu Pro Asp Ile Val Leu Phe Asn Asn Ala Asp Gly Asn Tyr Glu
     361         115                 120                 125
     363 Val Ser Phe Met Cys Asn Val Val Ile Asn His Lys Gly Asp Met Leu
     364     130                 135                 140
     366 Trp Val Pro Pro Ala Ile Tyr Lys Ser Ser Cys Ile Ile Asp Val Glu
     367 145                 150                 155                 160
     369 Phe Phe Pro Phe Asp Glu Gln Val Cys Thr Leu Val Phe Gly Ser Trp
     370                 165                 170                 175
E--> 372 Thr Tyr Asn Glu Asn Glu Ile Lys Leu Glu Phe Xaa Xaa Xaa Xaa Xaa
     373             180                 185                 190
E--> 375 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Asp
     376         195                 200                 205
     378 Val Pro Ala Ser Leu Val Asn Lys Arg Ser Arg Ile Glu Phe Gln Val
     379     210                 215                 220
     381 Arg Ile Arg Arg Lys Thr Leu Phe Tyr Thr Val Val Leu Ile Ile Pro
     382 225                 230                 235                 240
     384 Thr Val Leu Met Ala Phe Leu Ser Met Ala Val Phe Phe Leu Pro Thr
```

same error

RAW SEQUENCE LISTING DATE: 10/14/2004
PATENT APPLICATION: US/10/010,873 TIME: 10:23:26

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

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     385                 245                 250                 255
     387 Asp Ser Gly Glu Lys Ile Thr Leu Thr Ile Ser Val Leu Leu Ser Ile
     388             260                 265                 270
     390 Val Val Phe Leu Leu Leu Val Ser Lys Ile Leu Pro Pro Thr Ser Ser
     391         275                 280                 285
E--> 393 Thr Ile Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     394     290                 295                 300
E--> 396 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Tyr Phe Arg
     397 305                 310                 315                 320
     399 Gly Pro Arg Thr His Arg Met Pro Gln Trp Val Arg Val Val Phe Leu
     400                 325                 330                 335
     402 Gln Phe Leu Pro Lys Leu Val Cys Met Lys Arg Pro Lys Ser Ala Ser
     403             340                 345                 350
     405 Glu Arg Ser Ala Val Arg Ser Gly Met Ala Gln Leu Pro Gly Val Gly
     406         355                 360                 365
     408 Gln Phe Thr Leu Ser Pro Ser Ala His His Pro Leu Cys Pro Ser Ala
     409     370                 375                 380
     411 Asp Asp Arg Thr Thr Thr Ile Arg Asn Thr Ala Ser Asn Glu Thr Ser
     412 385                 390                 395                 400
E--> 414 Ala Tyr Tyr Pro Leu Ser Thr Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     415                 405                 410                 415
E--> 417 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe
     418             420                 425                 430
     420 Arg Asp Asp Trp Lys Tyr Val Ala Met Ile Ile Asp Arg Leu Leu Leu
     421         435                 440                 445
     423 Tyr Val Phe Phe Gly Ile Thr Val Gly Gly Thr Cys Gly Ile Leu Phe
     424     450                 455                 460
     426 Ser Ala Pro His Val Phe Gln Arg Ile Asp Gln Gln Glu Met Leu Asp
     427 465                 470                 475                 480
     429 Arg Leu Lys Glu Lys Tyr Asp Thr Ala Ser Asn Ile Pro
     430                 485                 490
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Same error

VARIABLE LOCATION SUMMARY DATE: 10/14/2004
PATENT APPLICATION: US/10/010,873 TIME: 10:23:27

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

Use of n's or Xaa's(NEW RULES):
Use of n's and/or Xaa's have been detected in the Sequence Listing.
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:2; Xaa Pos. 86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103
Seq#:2; Xaa Pos. 104,105,106,107,108,109,206,207,208,209,210,211,212,213
Seq#:2; Xaa Pos. 214,215,216,217,218,219,220,221,222,223,224,225,322,323
Seq#:2; Xaa Pos. 324,325,326,327,328,329,330,331,332,333,334,335,336,337
Seq#:2; Xaa Pos. 338,339,340,341,342,343,344,345,430,431,432,433,434,435
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VERIFICATION SUMMARY DATE: 10/14/2004
PATENT APPLICATION: US/10/010,873 TIME: 10:23:27

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number
L:146 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:2
M:340 Repeated in SeqNo=2
L:251 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:3
M:340 Repeated in SeqNo=3
L:354 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:4
M:340 Repeated in SeqNo=4